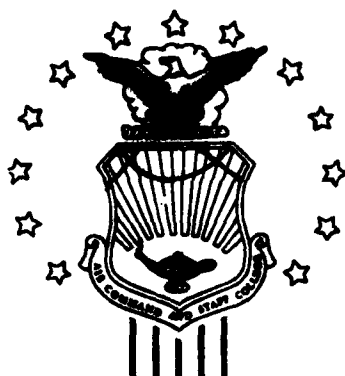


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AIR COMMAND AND STAFF COLLEGE

STUDENT REPORT

PEARL HARBOR--A STUDY IN THE
APPLICATION OF THE PRINCIPLES OF WAR

MAJOR WILLIAM L. WALTERS

84-2705

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20. ABSTRACT (Continue on reverse side if necessary and identify by block number) This paper represents a special report which will be used to assist in curriculum development by the Air Command and Staff College Warfare Studies Division, Air University. Chapter 1 contains Japanese and American background information prior to Pearl Harbor and describes the attack itself. Chapter 2 analyzes the attack in the context of the principles of war and details the correct and incorrect application of these principles by both sides. Chapter 3 provides seminar discussion questions for use by an ACSC course officer leading a seminar on the "principles of war."			

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PREFACE

Yesterday, December 7, 1941, a date which will live in infamy, the United States of America was suddenly and deliberately attacked by naval and air forces of the Empire of Japan . . . (16:18)

1. President Franklin Delano Roosevelt spoke these memorable words before a joint session of the United States Congress on 8 December 1941, when he asked that body to declare war on Japan. The previous day, the Japanese attacked our naval base at Pearl Harbor, Hawaii, damaging eight battleships, destroying over 180 aircraft, and killing some 2400 Americans for the loss of only 29 Japanese aircraft and six submarines. How did the Japanese succeed in attacking our naval and air assets on Oahu? Why were United States forces so unprepared to meet the attack? How were the principles of war applied by both sides? The purpose of this paper is to answer the above questions, examine the principles of war in AFM 1-1 and provide an historical battle analysis of Pearl Harbor for the Air Command and Staff College Warfare Studies Division. My analysis is divided into three distinct chapters, each with a specific purpose.

2. Chapter One describes the events that precipitated the attack on Pearl Harbor through both Japanese and American eyes and details the attack itself. A great deal of discussion is centered on the Japanese reasons for initiating hostilities and the planning factors they used to construct the attack. This treatment is valuable for today's military officer as it points out the geopolitical climate at the time and allows you to view the attack from the

CONTINUED

Japanese perspective. In addition, this background information is necessary to analyze the principles of war in a later chapter. American thinking, planning, and intelligence efforts are also closely examined to help illustrate the numerous mistakes made by the United States. The actual attack on Pearl Harbor is treated in a straightforward, historical manner and details the players involved, tactics used, and the outcome of the battle. An evaluation and analysis of the attack is found in Chapter Two.

3. Chapter Two analyzes how the principles of war contained in AFM 1-1 were applied or violated by each side. The principles of objective, offensive action, surprise, security, mass and economy of force, maneuver, timing and tempo, unity of command, simplicity, logistics, and cohesion are evaluated as they applied before, during, and after the Pearl Harbor operation. Objective is given the most extensive treatment as it was the key reason the Japanese decided to attack the United States. Additionally, the Japanese side is more heavily weighted since they planned and carried out the attack, while the Americans were merely the recipients. Security from the United States view is emphasized as this was our reason for defeat. Chapter Two is the heart of the paper and points out many important lessons for the professional military officer.

4. Chapter Three consists of discussion questions designed for use by an ACSC course officer to lead a seminar on Pearl Harbor. These questions will allow a seminar to learn more about a significant event in military history and will

CONTINUED

give them practice in applying a specific battle to the principles of war in AFM 1-1.

5. The military officer must never forget that the "bottom line" of his/her service to this nation is warfighting ability. As Douglas MacArthur noted in his inspirational "Duty, Honor, Country" speech to the cadets at West Point:

Yours is the profession of arms, the will to win, the sure knowledge that in war there is no substitute for victory, that if you lose, the nation will be destroyed . . . (23:4-58)

An examination of the Japanese attack on Pearl Harbor and how the principles of war were applied correctly and incorrectly by both sides will increase your warfighting ability. The very survival of our country might one day depend on it.

ABOUT THE AUTHOR

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Chapter One

BACKGROUND AND BATTLE DESCRIPTION

There is no denying that the seas are high in the Pacific. The time has come for the Japanese to make up their minds to reject any who stand in the way of their country. (6:3)

--Soho Tokutomi

BACKGROUND-JAPANESE

This sober warning by a Japanese journalist painted the state of relations between Japan and the United States in 1940. Throughout the late 1930s, relations between the two countries worsened. In 1937, Japan invaded north China amidst American protests and in 1939 took over Hainan Island off the Chinese coast. By the middle of 1940, the United States cut off all vital war material except petroleum. (6:5) On 16 July 1940, President Roosevelt announced the freezing of all Japanese trade and assets, including oil. (10:55) With the fall of France to Nazi Germany, Japan stationed troops in northern Indochina. (6:4) This move into the rich area to her south caused relations with the United States to deteriorate even more.

By 1941, Japan was ready for increased expansion into Southeast Asia to establish the Greater East Asia Co--Prosperity Sphere (in effect, the annexation of Malaya, the Philippines, and Netherland East Indies). (6:4) If Japan could control this "southern resources area" she could make herself economically self sufficient. This area contained 90% of the world's quinine, 85% of its rubber, 65% of the world's tin, plus large quantities of nickel, baux-

ite, iron, gold, and oil. (24:196) These resources were especially important to Japan since the imposition of the American embargo. Therefore, Japan hoped to keep the United States immobilized in the Pacific by diplomatic means (she sent Admiral Nomura to Washington for negotiation) while she continued her southern expansion. (6:6) If not, Japan meant to go to war to achieve her objectives. The economic sanctions imposed by the United States would soon curtail war production. Since an abandonment of her nationalistic ambitions was not possible, the only solution was to become self sufficient by invading Southeast Asia. (24:188)

Japan's previous strategy to contain the United States during her southern incursions was a defensive doctrine in the western Pacific. Under this strategy the United States would come to Japanese waters and fight on unfavorable terms near the home islands. Japan would have a strategic and tactical advantage due to better inner lines of communications and short supply lines. The naval planners imagined a war of attrition where their submarines would attack the American fleet as it proceeded toward the home islands, then destroy it as it approached Japan in a great naval battle. (6:12) The Commander in Chief of Japan's combined fleet, Admiral Isoroku Yamamoto felt this strategy was faulty on two counts: the United States fleet was too powerful, and it didn't protect the eastern flank of Japan's move south. He strictly opposed the defensive doctrine.

Yamamoto realized that the Navy had never won war games that required it to adopt wait and react tactics in the Pacific and felt the Navy must avoid such operations in a future war. (18:85) There was probably no man in Japan who wanted to avoid war with the United States more than Yamamoto. He had studied at Harvard and served as a naval attache in Washington and

knew the United States was technologically superior to Japan and possessed vastly greater resources. He had viewed American industry first hand and knew the United States' mass production system could easily outpace the Japanese economy. (6:10) However, Yamamoto knew Japan was committed to war due to its expansion policies and the fact that she couldn't live with the American embargo. (6:11) Therefore, he espoused an offensive strategy which had some chance of success. Yamamoto was a bold thinker and gambler who employed such maxims as "If you want the tiger's cubs, you must go into the tiger's lair." (6:13)

Yamamoto and his staff felt the best Japanese strategy was to win an early victory over the United States by moving the battle to the Hawaiian Islands. (6:14) The Russo-Japanese War had shown the Imperial Navy the advantages of a successful first blow. (18:85) This offensive action had two distinct advantages: it would allow the inferior Japanese fleet to fight the Americans on its own terms and it would force the issue before the rapid buildup of the United States Navy made victory impossible. (6:14) Yamamoto "envisioned a task force made up of carriers, cruisers, and destroyers" to lead an aerial attack against Pearl Harbor. For the plan to work, he knew he must catch the Americans sleeping. Therefore, secrecy and surprise were key elements of his plan. (6:15) Although there was still some disagreement among the Naval General Staff over his strategy, he selected Commander Minoru Genda to develop the plan.

Commander Genda was widely recognized as the most brilliant airman in the Japanese Navy in 1941. The Chief of the Operations Section of the Naval General Staff said "Genda stood head and shoulders above the majority of his colleagues in the field of naval aviation." (6:22) Under Yamamoto's

direction, Genda developed the plan for the attack of Pearl Harbor. However, the plan itself was not a new idea. Since 1931 all graduates of the Japanese Naval Academy were asked on their final exam how to attack Pearl Harbor and the same tactics are discussed in a 1936 paper by a Japanese Naval War College instructor. In addition, in 1932, the United States Navy conducted a surprise attack on Pearl Harbor using 152 aircraft launched from American carriers. (18:88) Using this background, the basic elements of Genda's plan as documented in Prange's At Dawn We Slept were:

- (1) the attack must catch the enemy completely by surprise
- (2) the main objective should be the United States carriers
- (3) the land based planes on Oahu should be a priority target
- (4) every available Japanese carrier should participate
- (5) the attack should utilize all types of bombing--torpedo, dive, and high level
- (6) fighter planes should play an active role in the attack
- (7) the attack should be made in daylight, preferably early morning
- (8) refueling at sea would be necessary, and
- (9) all planning must be done in secrecy. (6:25)

Additionally, Genda favored a follow up landing on Oahu, while Yamamoto preferred the limited strategy of an air strike only. Except for a few unresolved areas, Genda's plan was the basis of the attack.

Admiral Yamamoto realized there were several problems to be solved before the plan would work. First, Japanese escort ships, designed to support a battleship duel near Japan, lacked the range to reach Hawaii without refueling at sea. Second, torpedoes off Japanese planes dived too deep before leveling off to be used in a shallow port like Pearl Harbor. (7:40) Third, the Naval General Staff was hesitant to use six aircraft carriers for the operation. They felt they needed at least two carriers for air support during their move into Southeast Asia. In addition, the route of attack must be chosen. Two requirements dictated the choice: the achievement of surprise and the ability to refuel. A central or southern route would insure calmer weather

for refueling, but chances of detection by American reconnaissance aircraft from Wake and Midway islands was high. (22:97) The northern route was out of all commercial shipping lanes and known United States reconnaissance flights, but heavy seas in December might hamper refueling operations.

Eventually each of the limiting factors was resolved. The refueling problem was solved in two ways: Navy safety regulations were waived which allowed several carriers and capital ships to stow extra oil in vacant spaces aboard and traditional refueling positions were reversed, allowing battleships and carriers to precede their tankers. If the large ships had to maneuver quickly, they could do so without destroying the refueling hose. Torpedoes were modified with new fins which allowed them to be used in shallow waters. (6:323) Yamamoto convinced the Naval Staff that six carriers were necessary to adequately attack the United States fleet. He pointed to the attack on Port Arthur to open the Russo-Japanese war in 1904. That strike achieved complete surprise, but was only partially successful due to too little force. (9:250) And the newly gained confidence in refueling techniques combined with a report by a Japanese merchant ship on a trial run of the northern route that the seas were manageable and American reconnaissance non-existent made the northern approach the logical one. Yamamoto was confident his plan would work.

The Japanese were poised and ready for a strike on Pearl Harbor. The basic war plan then was to initiate initial offensive operations to neutralize the United States fleet, seize the rich southern resources area, and set up a perimeter of defense around Japan utilizing outlying territories. (24:195) Her move south was protected on the right flank by the occupation of China and nonaggression pact with Russia and would be protected on the

left by the destruction of the United States Pacific Fleet. (24:197) With the exception of two battleships in the Singapore area, the only opposing force was the American fleet. (4:13) Japan did not believe she could defeat the Allied powers in a protracted war. Her only chance for victory was to strike quickly and destroy their willingness to fight before their full strength could be used against her. (24:189) The situation in Europe and a quick Japanese victory would force the Allies to accept "fait accompli" in the Pacific. (24:195) As Sun-tzu noted in his military classic, the Art of War, "If the enemy leaves a door open, you must rush in." Unfortunately, the Americans were given many signals that the door was open, but failed to recognize any of them.

BACKGROUND--AMERICAN

The United States was given numerous warnings of impending attack in the year prior to Pearl Harbor. Unknown to the Japanese, the Signal Intelligence Service of the United States Army broke Japan's most complicated diplomatic codes in 1940, including the most secret known as "Purple." (6:80) The ability to read these codes, called "Magic," proved extremely important to American intelligence as the attack neared. However, the first warning of an attack on Pearl Harbor was a rumor relayed from Peru's minister to Tokyo to United States Ambassador Grew in early 1941. Grew cabled the information to the State Department:

My Peruvian colleague told a member of my staff that he had heard from many sources including a Japanese source that the Japanese military forces planned in the event of trouble with the United States, to attempt a surprise mass attack on Pearl Harbor using all their military facilities . . . (6:31)

Unfortunately Ambassador Grew and the State Department took no further steps to track the rumor to its "sources" and our first warning of attack

disappeared. (6:31) A short time later, Secretary of the Navy, Frank Knox, wrote a letter to Secretary of War, Henry Stimson, in which he stated ". . . If war eventuates with Japan, it is believed easily possible that hostilities would be initiated by a surprise attack upon . . . Pearl Harbor."

(6:45) Even though this prediction almost a year prior to hostilities caused concern in Washington, no concrete action was taken. In Hawaii, a changing of the guard took place.

Two new leaders assumed command on Oahu in February 1941. Rear Admiral Husband Kimmel became Commander in Chief of the Pacific Fleet and Lieutenant General Walter Short took over as commander of the Hawaiian Department, controlling army and air assets. Although both officers had long records of faithful service to their country, neither envisaged a surprise Japanese attack on Pearl Harbor as a reality. Both were influenced by the Army Chief of Staff George Marshall's statement that "The island of Oahu, 'due to its fortifications, its garrison, and its physical characteristics, is believed to be the strongest fortress in the world'." (6:122) Kimmel viewed his role as strictly offensive. Once war with Japan was declared, he would steam through the Pacific to defeat the Japanese. The fleet's offensive operations would keep the enemy away and would be the best defense of Pearl Harbor. (6:65) And even though Marshall instructed Short that his mission was to protect the fleet, Short based his defense on the fact that if the Japanese attacked Hawaii, it would be to occupy Oahu. (6:58) He looked upon an initial air attack as a preliminary operation to occupy the Hawaiian Islands. (6:126) As a result of these two divergent views, there was no integrated defense plan for the protection of Pearl Harbor.

Although Kimmel and Short did not envision a surprise air attack on Pearl Harbor, two staff studies done during 1941 clearly predicted the basis of the attack. Major General Frederick Martin, Commanding General of the Hawaiian Air Force, and Rear Admiral P. N. Bellinger, Naval Air Commander, produced the Martin-Bellinger report in March 1941 under the direction of Admiral Kimmel to work out a plan for joint action in the event of an attack on Oahu or the Pacific Fleet. (6:93) Under their "summary of the situation" they noted there might be a sudden raid against our ships and naval installations on Oahu and that the enemy might send fast raiding forces composed of carriers supported by fast cruisers. They surmised that the most likely form of attack would be a dawn, air attack launched by carriers within 300 miles. (6:94) The second study finished in August 1941 was done by Colonel William Farthing, Commander of the Fifth Bombardment Group at Hickam Field. Farthing not only envisioned a carrier attack but stated the enemy "can probably employ a maximum of six carriers against Oahu." He also predicted the time of the attack when he said "An enemy should be primarily interested in obtaining the maximum cover of darkness for his carrier approach . . . The early morning attack is therefore, the best plan of action . . ." (6:186) Both studies recommended daily patrols as far as possible to sea through 360 degrees to reduce the possibility of surprise attack. (6:95) One estimate placed the requirement at 180 reconnaissance aircraft for a continuous patrol to 800 miles. (25:45) This was far greater than the resources possessed in Hawaii. Besides, no one really believed the Japanese would attack Pearl Harbor.

The Japanese were bent on attack and made a series of moves signalling their intent. In September 1941, they directed the Japanese consulate in Honolulu to place a grid over Pearl Harbor and plot the position of each

ship in its specific anchorage. This dispatch became known as the "bomb plot" message. Army intelligence reported this occurrence to the Secretary of War and General Marshall but stirred no interest. (6:249) In early November 1941, Japan withdrew all its merchant vessels from the Western Hemisphere, an act which Navy intelligence considered an early indication of war. (6:336) Finally, near the end of November, when diplomatic negotiations in Washington with the Japanese were near a breakpoint, the Secretary of War warned American forces in the Pacific of imminent danger. He sent out the following message:

Negotiations with Japanese appear to be terminated to all practical purposes with only the barest possibility that the Japanese government might come back and offer to continue. Japanese future action unpredictable, but hostile action possible at any moment. If hostilities cannot repeat cannot be avoided, the United States desires that Japan commit the first overt action. This policy should not repeat not be construed as restricting you to a course of action that might jeopardize your defense. Prior to hostile Japanese action you are directed to take such reconnaissance and other measures as you deem necessary. (5:165)

As an afterthought an extra sentence was added to the message which weakened its impact: "But these measures should be carried out so as not repeat not to alarm the civilian population or disclose intent." (5:165) In Hawaii, General Short took action, but not the type expected by Washington.

The warning dispatch of 27 November was not interpreted as a war warning message by General Short. (24:205) He felt the Japanese would attack the Philippines or Malaya to initiate hostilities and that sympathizers in Hawaii would sabotage local military facilities. Therefore, instead of putting his forces on alert, he reacted to the sabotage threat on Oahu. He established a perimeter defense around Pearl Harbor and moved Army aircraft together on the ramp to protect them from infiltrators. (5:166) He also called in most of his troops and anti-aircraft batteries from the field and assembled

them in garrison to prevent sabotage. (24:205) Short then cabled the War Department that he had ordered "Alert A," meaning he was on alert for sabotage. However, the Army had changed the alert priority system only a few days before and the officers which read Short's cable assumed "Alert A" was the highest priority--full alert. (5:167) The Chief of Naval Operations, Admiral Stark, and Admiral Kimmel also had a misunderstanding. Alarmed by the movement of over 60 Japanese ships off the Indochina coast, Stark sent a danger signal to all United States Navy units in the Pacific which began, "This is a war warning." Unfortunately, he watered down the message by adding that the movement "was probably against the Philippines, Thai, or Kra Peninsula or possibly Borneo." Naval commanders were instructed to show the message to their army counterparts, but Kimmel never contacted Short and took no significant actions on his own. (5:166) Again, the two commanders missed a chance to prepare for war. It was almost too late, for the Japanese task force had departed for Hawaii.

PRELUDE TO ATTACK

The Japanese task force departed Hittokappu Bay, Etorafu Island, in the southern Kuriles at 0600 on 26 November 1941. Vice Admiral Nagumo Commander in Chief of the First Air Fleet, was in charge of the operation. The force consisted of the carriers, Akagi, Kaga, Soryu, Hiryu, Shokaku, and Zuikaku; the battleships Hiei and Kirishima; the cruisers Tone, Chikuma, and Abukuma; nine destroyers, three submarines, five midget submarines, and eight tankers. (11:940) The following order was issued to the task force:

1. The Carrier Striking Task Force will proceed to the Hawaiian Area with utmost secrecy and, at the outbreak of the war, launch a resolute surprise attack on and deal a fatal blow to the enemy fleet in the Hawaiian Area. The initial air attack is scheduled at 0330, X Day. Upon completion of the air attacks, the Task Force will immediately withdraw and return to Japan . . .

2. (a) While exercising strict antiaircraft and antisubmarine measures and making every effort to conceal its position and movements, the entire force in accordance with special orders will depart as a group from Hitokappu Bay at a speed of 12-14 knots. The force, refueling enroute whenever possible, will arrive at the standby point (42N 165W) . . . Subsequent to the issuance of the order designating X Day, the force will proceed to the approaching point (32N 157W).
- (b) Around 0700 hours, X-1 Day, the Task Force will turn southward at high speed (approximately 24 knots) from the vicinity of the approaching point. It will arrive at the takeoff point, 200 nautical miles north of the enemy fleet anchorage, at 0100 hours X Day (0530 Honolulu time), and commit the entire air strength to attack the enemy fleet and important airfields on Oahu. (21:7)

The task force proceeded eastward in a "protective formation" (SEE FIGURE 1 FOR ROUTE). The carriers sailed in parallel columns of three preceded by four destroyers which scouted 10 kilometers apart. Destroyers and cruisers guarded the flanks, while the tankers followed astern. The two battleships followed directly behind all the other ships. (6:417) Admiral Nagumo felt a great burden as he raced toward Hawaii. Sun-Tzu wrote: "Military tactics are like unto water, for water in its natural course runs away from high places and hastens downward. So in war, the way to avoid what is strong is to strike what is weak." Nagumo felt he was doing just the opposite. He was cruising toward the strongest fortress on earth. (6:395)

The strongest fortress on earth, Pearl Harbor, contained 101 naval vehicles on the morning of 7 December 1941. There were eight battleships, two heavy cruisers, six light cruisers, thirty destroyers, four submarines, one gunboat, nine minelayers, fourteen minesweepers, and 27 auxiliary ships. Fortunately for the United States, no carriers were in the harbor. The Enterprise had delivered fighters to Wake Island and was 200 miles west of Hawaii enroute to Pearl, and the Lexington was 400 miles southeast of Midway,

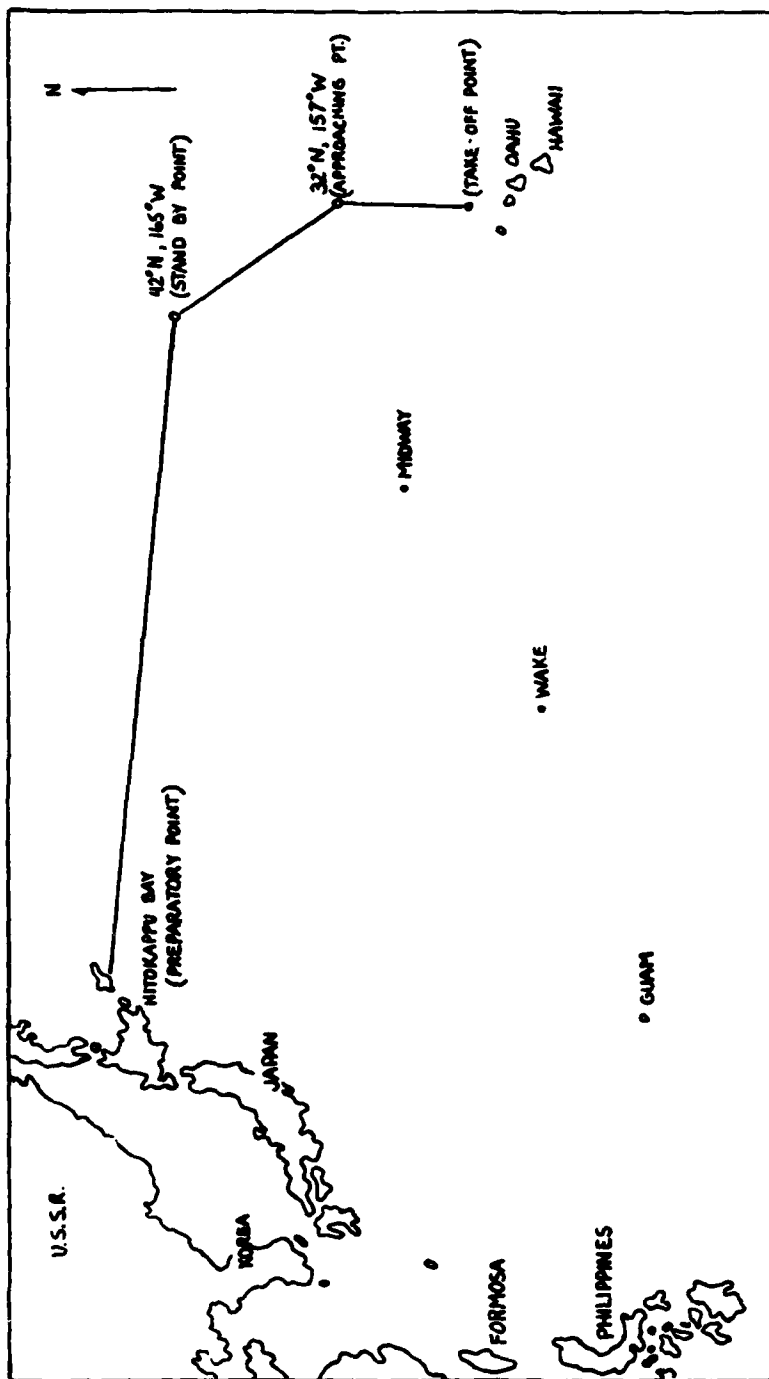


FIGURE 1 - Track of Carrier Task Force (21:8)

delivering Marine Corps aircraft to that island. (25:55) The Yorktown had been reassigned to the Atlantic Fleet, the Hornet was on a shakedown cruise in the Caribbean, and the Saratoga was under repair on the West Coast. (7:45) United States air strength was 396 aircraft. The Army had 93 fighters, 35 bombers, and 11 observation craft. The Navy had 15 fighters, 61 patrol planes, 36 scout planes, and 45 miscellaneous aircraft. However, many of these aircraft were obsolete or being repaired. (3:219) The only modern combat aircraft were a small number of B-17s, A-20s, and P-40s. The eight battleships, eight cruisers, and thirty destroyers mounted 780 anti-aircraft guns among them. (22:98) Only one officer and a switchboard operator manned the Naval Control Center on Ford Island. The recently arrived Army mobile radar on the north coast was scheduled to operate only from 0400 to 0700 and only seven Navy PBY patrol planes were scheduled for dawn antisubmarine patrol, all on the south coast of Oahu. (2:126) Normal weekend pass and liberty policies were in effect.

The Japanese fleet continued its eastward course toward Pearl Harbor. During this period, the fleet observed strict radio silence and was undetected by United States intelligence. In Japan, the progress of the task force was masked by false warship call signs, padded radio circuits, and deceptive devices to simulate the fleet in the Inland Sea. On 1 December, our naval intelligence reported, "Major capital ship strength remains in home waters, as well as the greater portion of carriers." (4:20) Other deceptive measures included sending a large number of Japanese sailors into Tokyo on a sight-seeing tour so the absence of navy personnel wasn't obvious and publicizing the departure of a Japanese passenger ship to Honolulu with Americans aboard. (11:942) On 4 December, the fleet reached a point 2350 miles east of Tokyo

and 1460 miles northwest of Pearl. Combat ships fueled to capacity from the tankers and the tankers dropped off. On the night of 6 December, the task force turned toward Hawaii and increased its speed to 24 knots. (4:22) Admiral Yamamoto radioed the fleet: "The rise or fall of the Empire depends upon this battle; everyone will do his duty with utmost efforts." (11:944)

The next to last warning the United States had of hostile Japanese intent was mishandled like previous signals. On Saturday 6 December, the Foreign Ministry in Tokyo warned the Japanese Embassy in Washington that a fourteen part cable was being transmitted for presentation to Secretary of State, Cordell Hull. (5:173) The fact that negotiations were at a standstill and this message was being sent should have alerted the United States that the Japanese were about to initiate overt action. Yet, the War Department did not call General Short or Admiral Kimmel to insure they were on alert. Even after the first thirteen parts were read by American intelligence via "Magic" intercepts and it was apparent the Japanese meant to break off diplomatic relations, no action was taken. When part fourteen arrived in Washington on Sunday morning, 7 December, Marshall sent the following message to all Army commands in the Pacific:

The Japanese are presenting at 1PM Eastern Standard Time today what amounts to an ultimatum. Also, they are under orders to destroy their code machine immediately. Just what significance the hour set may have we do not know but be on alert accordingly. (5:181)

However, the Army signal service between Washington and Honolulu was inoperative and the message was sent via the commercial telegraph system. (5:182) The cable arrived in Hawaii at 0733 Honolulu time, just prior to the Japanese attack, but since it was not marked "priority" it was not delivered until 1145, after the attack was over. (6:502)

THE BATTLE

At 0530 Honolulu time, the Tone and Chikuma each launched a single engine reconnaissance seaplane to reconnoiter Pearl Harbor. (6:490) At approximately 0605, the carriers began launching aircraft. The first planes to take off were the fighters led by Lieutenant Commander Itaya. Next came the high level bombers led by Lieutenant Commander Fuchida who was also the overall airborne commander. Third off was Lieutenant Commander Takahashi with the dive bombers. (7:45) The torpedo bombers were last, led by Lieutenant Commander Murata. Within fifteen minutes of the first launch, 183 aircraft took off. There were 43 fighters, 49 high level bombers, 51 dive bombers, and 40 torpedo planes. (6:491) After one circle over the task force, the planes headed due south for Oahu. It was 0615. (11:946) The attack formation consisted of Fuchida's high level bombers in the center at 9800 feet, two groups of dive bombers to the left at 11000 feet, and four groups of torpedo planes to the right at 9200 feet. Covering the entire force at 14,000 feet were the fighters. (6:499) At 0705, the second attack wave launched under the command of Lieutenant Commander Shimazaki. Thirty-six fighters took off first, followed by 54 high level bombers, and 78 dive bombers. The high level bombers flew on the left at 11500 feet with the dive bombers on the right at 10,000 feet. Again, the fighters flew top cover. (6:530) 351 aircraft were now headed toward Pearl Harbor.

The United States last two opportunities to head off the Japanese attack were mishandled by our forces. At 0342 on the morning of 7 December, a minesweeper sighted a periscope at the entrance to Pearl Harbor (the sighting was one of the Japanese midget submarines) and reported the incident to the destroyer Ward. The Ward was unable to pick up a contact. (6:484) At 0630,

a supply ship again spotted a periscope and called for the Ward. This time the Ward located the submarine and sank it. The destroyer's commander reported the incident to the Naval District Watch Officer and the information reached Admiral Kimmel at 0710. He "decided to wait further developments" and failed to notify the Army that the Navy had sunk a hostile submarine. (6:497) At 0702 the new Army radar unit located on the north shore of Oahu detected a large flight of aircraft 130 miles north of the island. The operator reported the contact to the assistant controller at Fort Shafter who disregarded the information. The controller was positive that the flight was our aircraft returning from a carrier, a local flight from Hickam, or twelve B-17s scheduled to arrive from the West Coast. (25:49) Neither at the time nor after the attack did the Army notify the Navy of the sighting. (6:501)

At 0740, the United States fleet lay in anchor at Pearl Harbor unaware of the impending attack. (SEE FIGURE 2 FOR SHIP LOCATIONS). At the same time, Lieutenant Commander Fuchida ordered the first attack wave to deploy. (SEE FIGURE 3 FOR ROUTE OF ATTACK) The targets of the high level bombers and torpedo planes were the battleships with the torpedo planes attacking first. The battleships were mostly anchored in pairs, so the inboard ships could not be reached with torpedoes. Therefore, the high level bombers intended to attack the inboard battleships leaving the outboard ships to torpedoes. The torpedo bombers carried an 800 kilogram (1760 pound) aerial torpedo and the high level bombers an 800 kilogram armor piercing bomb. The dive bomber's objective was the fighter bases at Ford Island and Wheeler Field and aircraft at Hickam, Wheeler, Ewa, Bellows, and Kaneohe. (25:91) The dive bombers carried a 250 kilogram (550 pound) general purpose bomb. (12:50)

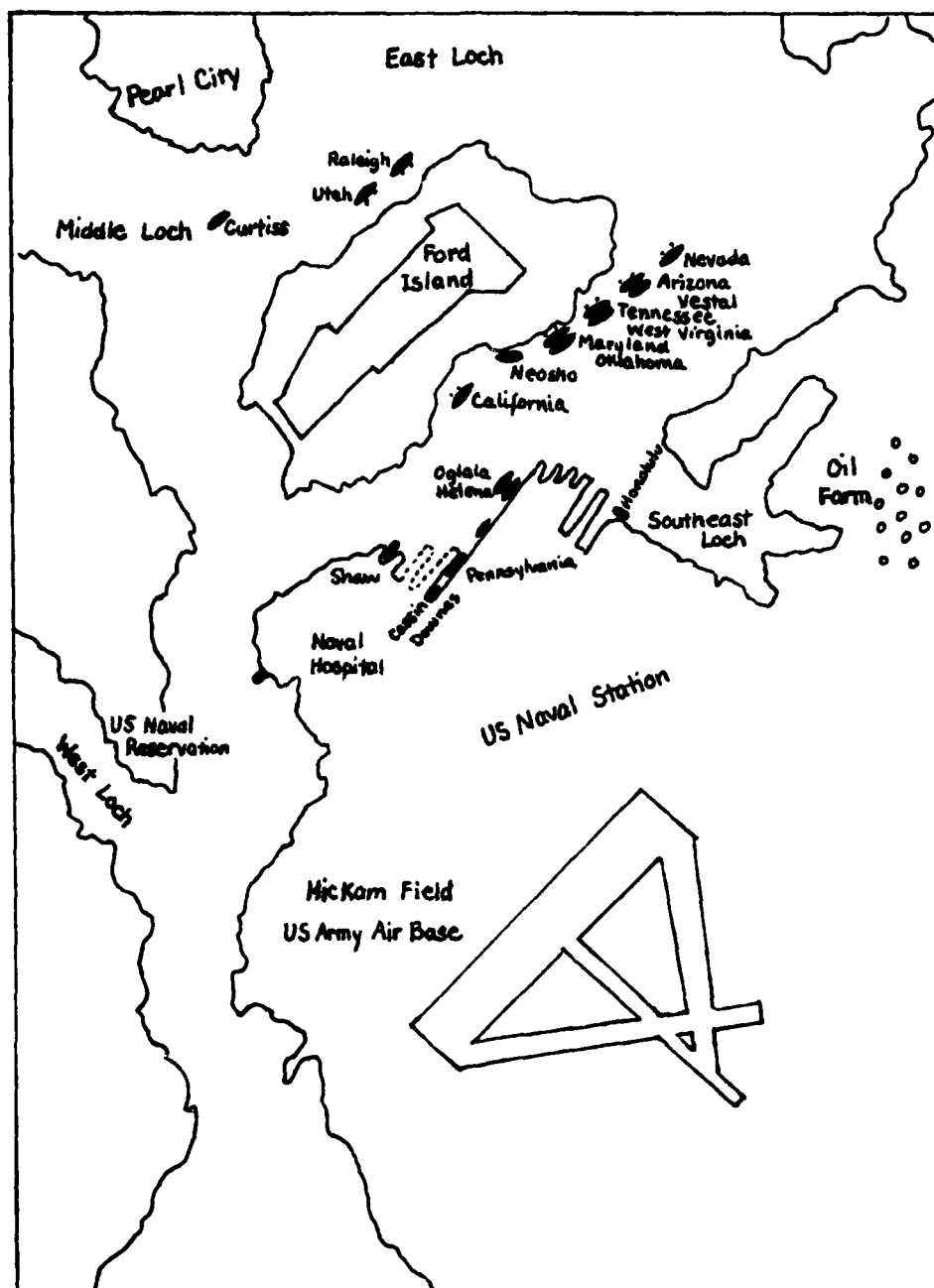


FIGURE 2 - Battleship Row, 7 December 1941 (14:33)

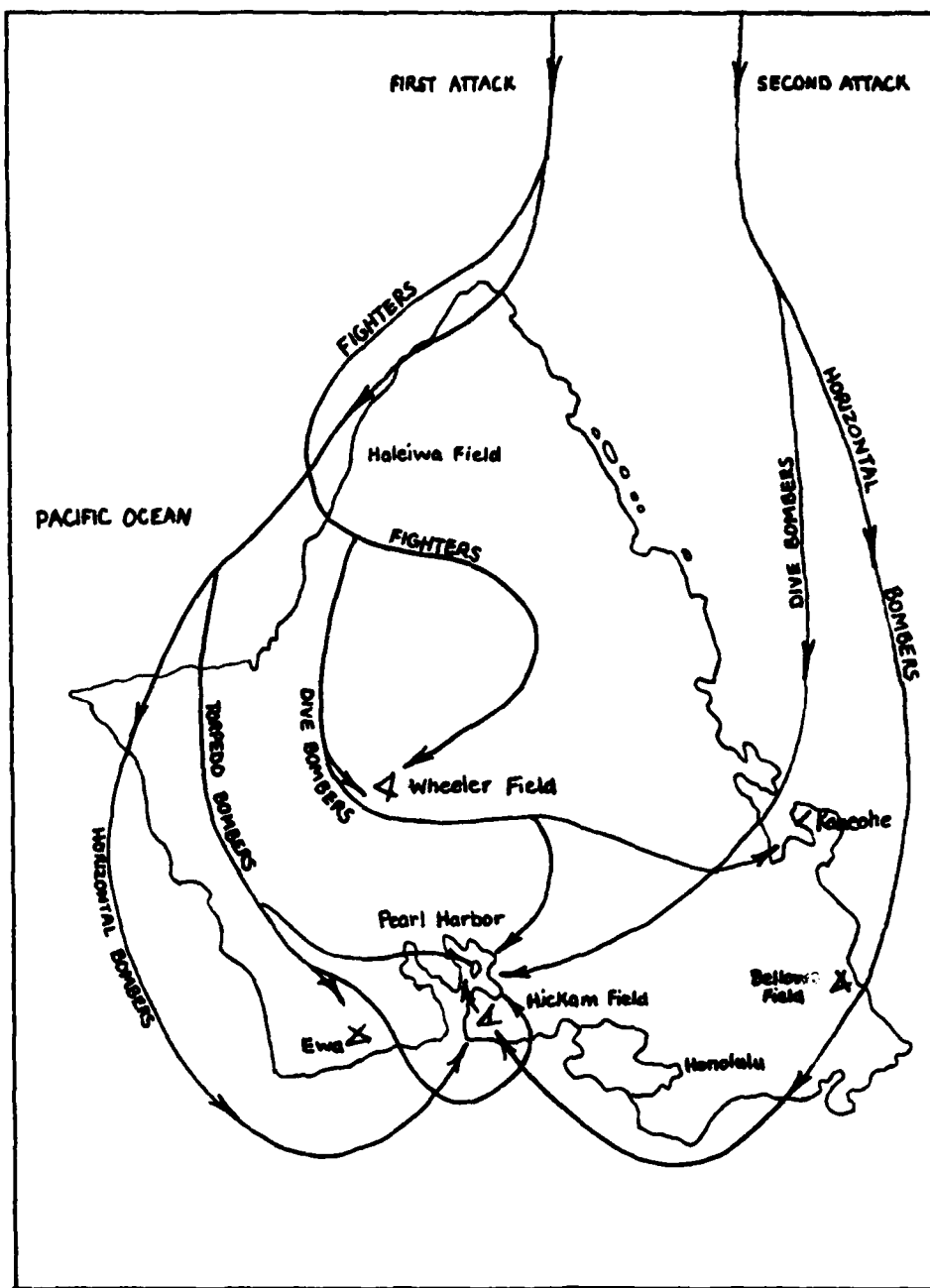


FIGURE 3 - Routes of Attacking Planes (14:31)

Fuchida hoped for tactical surprise but had developed a backup plan in the event it was not achieved. In this case, the dive bombers would attack first to cause confusion and attract enemy fire. The signal for attack was one shot from a flare pistol for surprise and two for nonsurprise. (11:946) At 0753, Fuchida rounded Barber's Point and sure that he achieved surprise radioed "Tora! Tora! Tora!" to the Japanese task force. (6:504) He then fired one shot from his flare pistol. Unfortunately, the fighters failed to see the signal and did not deploy. Fuchida fired a second shot which was interpreted by the dive bombers as a signal for them to attack first. (11:947) This caused confusion among the entire force and the torpedo planes were forced to take a shortcut to the battleships and attack five minutes early. The torpedo planes split northwest of Ewa, one group heading for the west side of Pearl Harbor, while the other group flew southeastward, then swung north and west over Hickam Field directly for "Battleship Row." (6:505) The dive bombers attacked Wheeler from the northwest and proceeded southeast toward Pearl and Kaneohe. The level bombers made a wide arc around the western coast of Oahu and attacked from the south. (25:93)

The Japanese opened fire at approximately 0750 at Kaneohe. About seven minutes later they struck Pearl Harbor. At Kaneohe, 27 flying boats and an observation plane were destroyed. At Ford Island, 19 patrol bombers, three scout bombers and four fighters were lost. At the Marine air base at Ewa, 33 aircraft were destroyed, including nine fighters. The Japanese destroyed four B-17 bombers, twelve B-18 bombers, and two A-20 light bombers at Hickam. (4:34) Over 30 of 52 modern P-40 fighters were put out of action at Wheeler. (6:524) The only American fighters to get airborne were deployed to the Army's Haleiwa Field. Two flights of four P-40s and one P-36 took

off to engage the Japanese. Lieutenant George Welch shot down four enemy planes in a P-40 and his wingman, Lieutenant Kenneth Taylor, destroyed two. (4:34) When the Japanese aircraft appeared over Pearl Harbor at 0757, the minelayer Oglala flashed the alarm: "All ships in harbor sortie." (6:506)

"Air Raid Pearl Harbor, This Is Not A Drill!" This now famous radio message went out over the wire at 0758. (6:517) The targets were the capital ships lined up on "Battleship Row" abeam Ford Island. The California was the furthest south; then the Neosho, an oiler; the Maryland and Oklahoma side by side; the Tennessee and West Virginia also together; the Arizona and repair ship Vestal; and then the Nevada. On the other side of the island was the cruiser Raleigh, seaplane tender Curtiss, and the target ship Utah. The Pennsylvania was in dry dock with the destroyers Downes, Shaw, and Cassin. The cruiser Helena and minelayer Oglala were moored opposite Ford Island. Northeast of the Helena was the cruiser Honolulu. Out of these nineteen ships, only the Neosho survived the attack undamaged. (4:35) The Oklahoma and West Virginia were sunk and the Arizona destroyed. The Nevada and California suffered severe underwater damage and eventually sank. The Tennessee and Maryland suffered only minor damage, while the Pennsylvania received superficial damage. (12:50) Although there was a comparative lull between 0825 and 0840, the first and second Japanese attack waves kept almost continuous pressure on the fleet and ground based aircraft.

The attack was over by 0945 and the last enemy aircraft departed from sight. In less than two hours, all eight battleships of the United States Pacific Fleet were either sunk, capsized, or damaged and three cruisers, three destroyers and four auxiliary ships put out of action. (22:99) Fuchida remained over the target area until the last aircraft of the second wave

completed its mission. The airplanes returned directly to the carriers which were already underway for Japan. Although Genda and Fuchida argued for a second strike, Admiral Nagumo felt his mission was completed. (25:95) The attack was a tragedy for the United States in both manpower and equipment loss. 188 planes were destroyed, including 96 Army and 92 Navy. An additional 128 Army and 31 Navy planes were damaged. (3:220) The Japanese lost nine fighters, fifteen dive bombers, and five torpedo planes for a total of 29 aircraft destroyed. (25:94) In addition, one fleet type submarine and five midget submarines were sunk. (25:95) American casualties were high with 2,008 Navy, 109 Marine Corps, 218 Army, and 68 civilians either killed or missing. 1178 personnel were wounded. (3:220) Within minutes, Japan's surprise attack on the Pacific Fleet "hurled the United States out of the role of the last great non-belligerent" and into the Second World War. (13:15)

Chapter Two

PRINCIPLES OF WAR ANALYSIS

AFM 1-1 states that "the principles of war represent generally accepted major truths which have proven successful in the art and science of conducting war." (19:2-4) This chapter examines the principles of objective, offensive, surprise, security, mass and economy of force, maneuver, timing and tempo, unity of command, simplicity, logistics, and cohesion from both the Japanese and American viewpoint in the Pearl Harbor attack. These warfighting principles are extremely important in military history and, if disregarded, can risk failure in future military operations. (19:2-4) Each principle is listed verbatim from AFM 1-1 and then analyzed from opposing sides.

OBJECTIVE

The most basic principle for success in any military operation is a clear and concise statement of a realistic objective. The objective defines what the military action intends to accomplish and normally describes the nature and scope of an operation. An objective may vary from the overall objective of a broad military operation to the detailed objective of a specific attack. The ultimate military objective of war is to neutralize or destroy the enemy's armed forces and his will to fight. However, the intimate bond which ties war to politics cannot be ignored. War is a means to achieving a political objective and must never be considered apart from the political end. Consequently, political imperatives shape and define military objectives. It follows that the objective of each military operation must contribute to the overall political objective. (19:2-4)

Japanese

I analyzed Japanese objective from three viewpoints: (1) the detailed objective of the attack on Pearl Harbor, (2) the objective of the broad

military operation in the Pacific, and (3) the ultimate military objective of destroying the enemy's armed forces and his will to fight. My contention is the Japanese were partially successful in the first case, successful in the second case, and totally unsuccessful in the third case.

The specific objective of the attack on Pearl Harbor was to neutralize the United States Pacific Fleet, specifically American aircraft carriers and land based aircraft on Oahu. In this respect, the Japanese were partially successful. They destroyed a significant number of American aircraft and thoroughly disrupted activities at all United States airbases. However, not one carrier of the Pacific Fleet was attacked since none were in the harbor at the time. The principal target of the Japanese attack became the eight American battleships at Pearl. Three of the eight ships suffered only minor damage and three more were later salvaged in the shallow water of the harbor. In fact, only two of the eight battleships did not return to action in World War Two. The most serious Japanese mistake was the basic plan of attack. Japan failed to target the Naval Supply Depot tank farm or ammunition depot. (15:23) Destruction of these critical supplies would have immobilized the fleet for months or even years. (25:288) As Admiral Kimmel said:

Even if they had not sunk a ship, the Japs might have crippled the base and destroyed all the fleet's fuel supplies which were in the open. The result might have been worse than it actually was, because this would have forced the fleet to return to the West Coast . . . (4:25)

This fact, combined with the escape of the American carriers came back to haunt the Japanese at the battle of Midway where they lost the carriers Akagi, Soryu, Kaga, and Kiryu. (4:26)

In the case of the broad military operation in the Pacific, the Japanese were entirely successful. Japan executed the Pearl Harbor attack for the

purpose of immobilizing the American fleet while she moved south. (4:24) The only threat to Japan's left flank was neutralized, and for the next five months the United States engaged only in defensive operations while the Japanese conquered Southeast Asia. (24:212) Japan felt that with this success and a subsequent defensive posture in the Far East, she would be able to obtain her goals and secure peace in the Greater East Asia Co-Prosperity Sphere. (18:85) However, Japan had neglected a basic principle of objective.

The ultimate military objective is to destroy the enemy's armed forces and his will to fight. In this respect, the Japanese were totally unsuccessful on two counts. First, Japan did not have the industrial base, resources, or population to defeat the United States in a strategic war. This being the case, her only chance of success was to completely defeat America in the Pacific. Commander Genda favored a full scale attack on Oahu during the planning phases of the operation. He said "We should follow up this attack with a landing." (6:26) Genda saw the attack as complete destruction of the enemy at one decisive stroke. Yamamoto on the other hand saw the strike as a crippling blow. (6:27) If the Japanese had followed up the air attacks with an invasion force, they would have denied the United States a base in the Central Pacific and essentially eliminated us from that theater of operations. Second, Japan failed to destroy the American will to fight. She actually intensified and directed our will. After Pearl Harbor, the United States unified a wide range of divergent views and opinions and joined together in a spirit of total dedication to the armed forces. (25:4)

American

I examined American objective from the political viewpoint with a cursory look at military objectives. United States policy at the time of Pearl Harbor

was one of deterrence and a bid for time. We hoped to stop further Japanese expansion in the Pacific without going to war and at the same time upgrade the preparedness of our armed forces. Roosevelt's economic embargo combined with his appointment of MacArthur in the Philippines as commander of US forces in the Far East forced Japan to make a choice. America's front line of defense was moved from Hawaii to Manila. Japan could either abandon her designs on the southern resources area or break through this defense line to seize the oil and minerals of Southeast Asia. The United States oil embargo accelerated Tokyo's timetable. She was forced to act before her fuel supplies were exhausted or negotiate until 1942 and encounter a much stronger American military. Japan attacked and the United States policy of deterrence failed because it made a pre-emptive strike an attractive option. (10:61) Militarily, the United States armed forces did not understand their objective on Oahu as a deterrent. The Navy viewed the fleet as an offensive weapon which needed no protection, and the Army felt it was in Hawaii to protect against a land invasion, not defend the fleet. Neither service conceived of the type attack Japan actually launched. (6:125)

OFFENSIVE

Unless offensive action is initiated, military victory is seldom possible. The principle of offensive is to act rather than react. The offensive enables commanders to select priorities of attack, as well as the time, place, and weaponry necessary to achieve objectives. Aerospace forces possess a capability to seize the offensive and can be employed rapidly and directly against enemy targets. Aerospace forces have the power to penetrate to the heart of an enemy's strength without first defeating defending forces in detail. Therefore, to take full advantage of the capabilities of aerospace power, it is imperative that air commanders seize the offensive at the very outset of hostilities. (19:2-5)

Japanese

The Japanese met all the requirements of offensive during their Pearl Harbor operation. Admiral Yamamoto rejected the previous Japanese thinking of a great defensive battle in the Pacific and opted for an offensive, first strike against American forces. He understood from operations in the Russo-Japanese war that Japan could ensure victory by a daring attack on the first day of hostilities. (18:85) He felt it was necessary to take the attack to the heart of the American forces in the Pacific, Pearl Harbor. Commander Genda's battle plan allowed him to select priorities of attack as well as the time and place of engagement.

American

The United States on the other hand, due to a political decision, reacted rather than acted at Pearl Harbor. The war warning messages of late November 1941 sent to the Pacific established the fact that hostilities were imminent. It was not a question of if, but where and when the Japanese would attack. (10:59) Interdiction of the invasion force moving toward Southeast Asia or dispatch of the Pacific Fleet to block a Japanese breakout from the home islands were possible American options. Yet, the United States decided to let the Japanese fire the first shot. Secretary of War, Henry Stimson's diary relates:

We realized that in order to have the full support of the American people it was desirable to make sure that the Japanese be the one to do this, so that there should remain no doubt in anyone's mind as to who were the aggressors. (10:59)

SURPRISE

Surprise is the attack of an enemy at a time, place, and manner for which the enemy is neither prepared nor expecting an attack. The principle of surprise is achieved when an enemy is unable to react effectively to an attack. Surprise is achieved through security,

deception, audacity, originality, and timely execution. Surprise can decisively shift the balance of power. Surprise gives attacking forces the advantage of seizing the initiative while forcing the enemy to react. When other factors influencing the conduct of war are unfavorable, surprise may be the key element in achieving the objective. The execution of surprise attacks can often reverse the military situation, generate opportunities for air and surface forces to seize the offensive, and disrupt the cohesion and fighting effectiveness of enemy forces. Surprise is a most powerful influence in aerospace operations, and commanders must make every effort to attain it. Surprise requires a commander to have adequate command, control, and communications to direct his forces, accurate intelligence information to exploit enemy weaknesses, effective deception to divert enemy attention, and sufficient security to deny an enemy sufficient warning and reaction to a surprise attack. (19:2-5)

Japanese

Surprise was the key to Japanese success at Pearl Harbor. Yamamoto knew the immense importance of timing in the attack; it must start the war, not follow a declaration. Once war was declared, surprise would be lost. (6:100) Commander Genda also understood the importance of surprise. The first point in his plan for the Pearl Harbor operation was: "the attack must catch the enemy completely by surprise." If surprise was not achieved, the losses to Japan would be prohibitive. (6:25) The Japanese attained surprise in three areas: (1) timing; (2) direction; and (3) means of attack. Japan attacked Hawaii prior to a formal declaration of war against the United States. In fact, her diplomats were still negotiating in Washington D.C. the morning of the raid. Moreover, it was planned as the first strike in the Pacific offensive so that no other actions disclosed Japan's intentions. The concentration of Japanese forces in Southeast Asia riveted the world's attention on Malaya and the Dutch East Indies. Hawaii seemed safe due to its position on the other side of the Pacific and its reputation as "the strongest fortress in the world." The introduction of the carrier as a long

range power projection weapon disproved Pearl Harbor's invulnerability and allowed Japan to seize the offensive. (24:213)

American

The United States was caught by complete surprise at Pearl Harbor. Despite over a year of warnings and signals of the Japanese intent to attack, the Pacific Fleet was moored, unprotected, in neat rows on the morning of 7 December 1941. Army, Navy, and Marine Corps aircraft were parked close together to prevent sabotage. Anti-aircraft guns required from one to four hours to become operational. Long range reconnaissance flights were limited and barrage balloons and torpedo nets were not being used. American personnel were on normal weekend schedules. (14:30) United States armed forces on Oahu operated under peacetime conditions despite specific warnings from their headquarters of a probability of war. The prevailing view in Washington, from President Roosevelt through the Army and Navy commanders, was the Japanese were going to strike in Southeast Asia, not Hawaii. (14:38) However, Admiral Kimmel and General Short were still ultimately responsible for the surprise attack. As the Joint Congressional Committee on the Investigation of Pearl Harbor stated after the war:

Both Admiral Kimmel and General Short have insisted they received no information that Hawaii was to be attacked. Yet commanders in the field cannot presume to expect that they will be advised of the exact time and place an enemy will attack or indeed that their particular post will be attacked. As outpost commanders it was their responsibility to be prepared against surprise and the worst possible contingency . . .

. . . It is not the duty of the outpost commander to speculate or rely on the possibilities of the enemy attacking at some other outpost instead of his own . . . (24:214)

SECURITY

Security protects friendly military operations from enemy activities which could hamper or defeat aerospace forces. Security is taking continuous, positive measures to prevent surprise and preserve freedom of action. Security involves active and passive defensive measures and the denial of useful information to an enemy. To deny an enemy knowledge of friendly capabilities and actions requires a concerted effort in both peace and war. Security protects friendly forces from an effective enemy attack through defensive operations and by masking the location, strength, and intentions of friendly forces. In conducting these actions, air commanders at all levels are ultimately responsible for the security of their forces. Security in aerospace operations is achieved through a combination of factors such as secrecy, disguise, operational security, deception, dispersal, maneuver, timing, posturing, and the defense and hardening of forces. Security is enhanced by establishing an effective command, control, communications, and intelligence network. Intelligence efforts minimize the potential for enemy actions to achieve surprise or maintain an initiative, and effective command, control, and communications permit friendly forces to exploit enemy weaknesses and respond to enemy actions. (19:2-5)

Japanese

AFM 1-1 lists secrecy, disguise, operational security and deception as important to security in aerospace operations. The Japanese made use of all these factors with secrecy being foremost as discussed in the preceding principle. The fact that Yamamoto planned and developed the Pearl Harbor operation for over a year without detection by enemy intelligence agencies is a testimony to operational security in the Japan Navy. (26:10) However, disguise and deception were also extremely important. Through the use of padded radio circuits, false call signs and deceptive devices, the Japanese led American intelligence to believe the Imperial Navy was in the Inland Sea, when in fact the fleet was on its way to Hawaii. (4:20) The fleet aided its cause by maintaining strict radio silence. (11:942) In early December, sailors from the Yokosuka Naval barracks were dispatched to Tokyo to mask the large number of naval personnel which sailed with the attack

force. (11:941) Japanese intelligence also played a vital role in the success of the attack. Japan operated an effective espionage operation at their consulate in Honolulu. The consulate provided complete information on the American fleet including the exact location of ships in Pearl Harbor and the fact that the majority of the fleet returned to harbor every weekend. In addition, the Honolulu Star-Bulletin routinely published fleet schedules in the paper. (6:72)

American

Just as surprise was the key to Japanese success at Pearl Harbor, security was the key to American defeat. The United States made serious security mistakes for over one year prior to the attack. In order to realize the magnitude of these mistakes, I have recapped the warnings America received. First, in January 1941, Ambassador Grew was informed of a rumor of a Japanese attack on Pearl Harbor. He reported it to Washington, but no action was taken. Shortly later, Secretary of the Navy Knox theorized that a surprise attack on Hawaii was possible, just as the Martin-Bellinger report in March 1941 and Farthing report in August 1941 correctly predicted the basic attack plan. Interception of the "bomb plot" message by United States intelligence and the war warnings of late November 1941 were misinterpreted and mishandled by high level civilian and military officials. Marshall's message to Hawaii arrived after the attack was over. Even the two sightings of Japanese submarines in Pearl Harbor on 7 December by a US destroyer and the detection of a large formation of unknown aircraft by Army radar were misread and ignored by American forces. (17:66) As Roberta Wohlstetter states in Pearl Harbor, Warning and Decision:

The fact of surprise at Pearl Harbor has never been persuasively explained by accusing the participants, individually or in groups, of conspiracy or negligence, or stupidity. What these examples illustrate is the very human tendency to pay attention to the signals that support current expectations about enemy behavior. If no one is listening for signals of an attack against a highly improbable target, it's very difficult for signals to be heard. (8:392)

John Costello in the Pacific War supports this thesis when he says:

In other words, too many alerts, too much intelligence pointing the Japanese attack toward the western side of the Pacific, too great a reliance on Magic, and too logical analysis of Japanese military intentions, with a consequent failure to accord importance to the last minute Pearl Harbor clues, allowed Kimmel and Short to sleep soundly the night before Pearl Harbor. (2:126)

Failure of the United States to correctly read, interpret, and act on the many signals it received prior to the Japanese attack was the single greatest military error in the Pearl Harbor operation.

MASS AND ECONOMY OF FORCE

Success in achieving objectives with aerospace power requires a proper balance between the principles of mass and economy of force. Concentrated firepower can overwhelm enemy defenses and secure an objective at the right time and place. Because of their characteristics and capabilities, aerospace forces possess the ability to concentrate enormous decisive striking power upon selected targets when and where it is needed most. The impact of these attacks can break the enemy's defenses, disrupt his plan of attack, destroy the cohesion of his forces, produce the psychological shock that may thwart a critical enemy thrust, or create an opportunity for friendly forces to seize the offensive. Concurrently, using economy of force permits a commander to execute attacks with appropriate mass at the critical time and place without wasting resources on secondary objectives. War will always involve the determination of priorities. The difficulty in determining these priorities is directly proportional to the capabilities and actions of the enemy and the combat environment. Commanders at all levels must determine and continually refine priorities among competing demands for limited aerospace assets. This requires a balance between mass and economy of force, but the paramount consideration for commanders must always be the objective. . . (19:2-6)

Japanese

The Japanese operation in the Hawaiian Islands was not an isolated attack; it was a coordinated effort throughout the Pacific which included a large

land invasion in Southeast Asia. This caused a serious dilemma for the Imperial Navy. Admiral Yamamoto insisted that six carriers be used in the Pearl Harbor attack. He felt mass was necessary to defeat the American fleet. Commander Genda stated in his draft plan that "every available carrier should participate in the operation." He felt a large force would have more chance of success. (6:25) Yet, carrier airpower was needed in the southern operation to support landings in that area. The Japanese Naval Staff wanted to limit carriers for Pearl Harbor, the principle of economy of force. In the end, Yamamoto won by threatening to resign if six carriers were not used. (6:297) His judgment proved correct as the attack on Pearl Harbor and all other operations in the Pacific were successful. The Japanese achieved mass in carrier airpower in Hawaii while she practiced economy of force in the rest of the theater. (26:14)

American

AFM 1-1 states that "aerospace forces possess the ability to concentrate enormous decisive striking power upon selected targets where and when it is needed most." (19:2-6) If the United States had attacked the Japanese fleet with all the available air assets on Oahu, the outcome of Pearl Harbor could have been much different. American airpower was sufficient to inflict serious damage on Japan's carriers. However, due to lack of warning and inadequate aircraft dispersal, only a handful of United States fighters got airborne. The principle of mass was not applied on the American side.

MANEUVER

War is a complex interaction of moves and countermoves. Maneuver is the movement of friendly forces in relation to enemy forces. Commanders seek to maneuver their strengths selectively against an enemy's weakness while avoiding engagements with forces of superior

strength. Effective use of maneuver can maintain the initiative, dictate the terms of engagement, retain security, and position forces at the right time and place to execute surprise attacks. Maneuver permits rapid massing of combat power and effective disengagement of forces. While maneuver is essential, it is not without risk. Moving large forces may lead to loss of cohesion and control. (19:2-6)

Japanese

The Japanese effectively used maneuver in their attack on Pearl Harbor. By choosing a northern approach to Hawaii, the Japanese task force steamed, undetected, from the home islands to within several hundred miles of Oahu. Maneuver enabled them to launch a surprise attack.

American

The garrison mentality displayed by the United States precluded American forces from maneuvering at Pearl Harbor. Our aircraft were parked together to prevent sabotage with none on a quick reaction status. Our ships were not fully manned and were unable to sortie after the attack began. The USS Nevada did make a run for the harbor entrance but came under heavy attack. Her skipper, fearing she would sink and block the harbor, grounded the ship in the mud. (6:536) In effect, the United States had no maneuver option due to errors made in the positioning and readiness of its forces.

TIMING AND TEMPO

Timing and tempo is the principle of executing military operations at a point in time and at a rate which optimizes the use of friendly forces and which inhibits or denies the effectiveness of enemy forces. The purpose is to dominate the action, to remain unpredictable, and to create uncertainty in the mind of the enemy. Commanders seek to influence the timing and tempo of military actions by seizing the initiative and operating beyond the enemy's ability to react effectively. Controlling the action may require a mix of surprise, security, mass, and maneuver to take advantage of emerging and fleeting opportunities. Consequently, attacks against an enemy must be executed at a time, frequency, and intensity that will do the most to achieve objectives. Timing and tempo require that commanders have an intelligence structure that can identify opportunities and a command, control, and communications network that can responsively direct combat power to take advantage of those opportunities. (19:2-6)

Japanese

I examined Japanese timing and tempo from two viewpoints: (1) the initial attack and (2) follow on operations. I contend that Japan successfully applied this principle in the former case, but made a serious error of judgment in the latter.

AFM 1-1 lists a mixture of surprise, security, mass, and maneuver as requirements to control the action in war. (19:2-6) As previously shown, Japan used all these principles correctly in their initial operations at Pearl Harbor. Their early morning, weekend attack from the north using six carriers was a complete surprise. However, in follow on operations the Japanese failed to execute attacks at a time, frequency, and intensity that did the most to achieve their objectives. (19:2-6)

The Japanese possessed almost complete air superiority over the Hawaiian Islands after their initial attack. There were several P-40 and P-36 fighters still operational, but they were no match for Japanese carrier airpower. No American battleships were operational and there were no carriers in the immediate area (although the Japanese were unsure of their whereabouts). Yet, Admiral Nagumo, the Japanese task force commander, failed to stay in the area and reattack Pearl Harbor even though this was a requirement in the operations order. (21:13) As Wallin says in his Pearl Harbor: Why, How, Fleet Salvage and Final Appraisal:

The Japanese commander of the attacking force felt that his mission was completed and that he should return to Japan . . . It apparently did not occur to him that his planes could have destroyed the thirty-eight cruisers and destroyers that remained afloat . . . or the reserve fuel oil supply . . . that would have immobilized the fleet for months or even years. His planes could have destroyed the mechanical ships and drydocks which were indispensable to a fleet at war. (25:288)

Fleet Admiral Chester Nimitz said, "Such attacks could have been made with impunity as we had little left to oppose them." (25:188) Like General McClellan at Antietam in the Civil War (20:86) and Field Marshall Montgomery in North Africa during World War Two, Admiral Nagumo's failure to press the attack was a serious error. (1:122) It appears that he worried about minimum damage to his force instead of maximum damage to the enemy. (6:544) As pointed out under "objective," the Japanese lost the opportunity to eliminate the United States from the Pacific War for several years due to faulty application of the principle of timing and tempo.

American

The Japanese surprise attack negated every American opportunity to use timing and tempo in its favor. Without an effective intelligence or command and control network, a commander is doomed to react to the enemy's initiatives. This is what Admiral Kimmel and General Short faced on 7 December 1941.

UNITY OF COMMAND

Unity of command is the principle of vesting appropriate authority and responsibility in a single commander to effect unity of effort in carrying out an assigned task. Unity of command provides for the effective exercise of leadership and power of decision over assigned forces for the purpose of achieving a common objective. Unity of command obtains unity of effort by the coordinated action of all forces toward a common goal. While coordination may be attained by cooperation, it is best achieved by giving a single commander full authority.

Unity of command is imperative to employing all aerospace forces effectively. The versatility and decisive striking power of aerospace forces places an intense demand on these forces in unified action. To take full advantage of these qualities, aerospace forces are employed as an entity through the leadership of an air commander. The air commander orchestrates the overall air effort to achieve stated objectives . . . (19:2-6 - 2-7)

Japanese

The Japanese correctly applied unity of command at every level at Pearl Harbor. The key to success was Admiral Yamamoto's overall direction of the operation. He delegated every task to a single commander with complete authority for mission accomplishment. Admiral Nagumo was the overall task force commander and was the final authority after the attack force departed Japan. Commander Genda was responsible for planning the attack and was the air commander of the task force. Lieutenant Commander Fuchida personally led the first wave and served as the airborne commander over Pearl Harbor. Not once during the operation was the on scene commander directed by someone above him in the chain of command; each had complete authority for their decisions.

American

There was no unity of command among United States armed forces in Hawaii. Even though there was an outward appearance of excellent liaison between the Army and Navy, the commanders on Oahu were not familiar with each other's organization or measures for defense. (24:206) James Trainor documents this in his article "Re-Learning The Lessons of Pearl Harbor" where he says:

Both . . . Kimmel, Pacific Fleet Commander, and General Short, the Army Commander were independent agents and any cooperation between them was voluntary . . . General Short . . . assumed that the Navy's offshore patrol was functioning and would therefore give him warning of an attack . . . Admiral Kimmel for his part assumed that the Army's Air Warning Service [radar] . . . was able to perform its mission of protecting Pearl Harbor . . . Neither commander, in fear of stepping on the other's toes, verified his assumptions. (17:66)

SIMPLICITY

To achieve a unity of effort toward a common goal, guidance must be quick, clear, and concise--it must have simplicity. Simplicity promotes understanding, reduces confusion, and permits ease of execution in the intense and uncertain environment of combat. Simplicity

adds to the cohesion of a force by providing unambiguous guidance that fosters a clear understanding of expected actions. Simplicity is an important ingredient in achieving victory, and it must pervade all levels of a military operation. Extensive and meticulous preparation in peacetime enhances the simplicity of an operation during the confusion and friction of wartime. Command structures, strategies, plans, tactics, and procedures must all be clear, simple, and unencumbered to permit ease of execution. Commanders at all levels must strive to establish simplicity in these areas, and the peacetime exercise of forces must strive to meet that same goal. (19:2-7)

Japanese

The Japanese kept the plan of attack at Pearl Harbor relatively simple. Each pilot made over fifty training flights at Kagoshima Bay in Japan which closely resembled the Pearl Harbor area and each ship had a mockup of the target area for aircrews to study once the fleet departed for Hawaii. In addition, there were maps and photographs of the harbor with almost a daily representation of the location of American ships. (26:20) The operations order was short and allowed the task force maximum flexibility. (21:7) Even the detailed attack plans were fairly simple with only several options. Failure of one part of the plan did not interfere with the overall execution. This was clearly demonstrated when Fuchida signalled for the attack and there was some confusion whether the torpedo bombers or dive bombers should attack first. They attacked near simultaneously and the plan still worked. (11:946-947)

American

AFM 1-1 lists "extensive and meticulous preparation in peacetime" as the method to avoid "the confusion and friction of wartime." (19:2-7) As discussed in Chapter One, Admiral Kimmel felt the fleet's role was purely offensive and General Short felt that his job was to protect Oahu, not the fleet. Therefore, the Army and Navy rarely practiced for the defense of

Pearl Harbor either singly or in unison. The lack of a plan or practice in peacetime translated into chaos and confusion in war.

LOGISTICS

Logistics is the principle of sustaining both man and machine in combat. Logistics is the principle of obtaining, moving, and maintaining warfighting potential. Success in warfare depends on getting sufficient men and machines in the right position at the right time. This requires a simple, secure, and flexible logistics system to be an integral part of an air operation. Regardless of the scope and nature of a military operation, logistics is one principle that must always be given attention. Logistics can limit the extent of an operation or permit the attainment of objectives . . . (19:2-7)

Japanese

Logistics was a prime cause of the attack on Pearl Harbor. President Roosevelt's embargo made the oil situation critical in Japan. Her war machine was within six months of running out of petroleum, making any southern move impossible. (6:235) At the operational level, the problem of refueling the task force in rough December seas and developing and producing shallow water torpedoes were logistical problems which had to be solved prior to the attack.

American

The United States was unsuccessful in "getting sufficient men and machines in the right position at the right time." (19:2-7) This was not because of neglect or oversight on anyone's part. Rather, the national command authorities in Washington made a conscious decision to place priority in the European and Atlantic theaters. (6:129) War with Hitler seemed more likely than war with Japan. Therefore, the trained aircrews, patrol planes, and long range bombers which might have prevented Pearl Harbor were diverted from the Pacific.

COHESION

Cohesion is the principle of establishing and maintaining the war-fighting spirit and capability of a force to win. Cohesion is the cement that holds a unit together through the trials of combat and is critical to the fighting effectiveness of a force. Throughout military experience, cohesive forces have generally achieved victory, while disjointed efforts have usually met defeat. Cohesion depends directly on the spirit a leader inspires in his people, the shared experiences of a force in training or combat, and the sustained operational capability of a force. Commanders build cohesion through effective leadership and generating a sense of common identity and shared purpose . . . (19:2-8)

Japanese

The warrior ethic was prevalent in the Japanese armed forces in World War Two. Admiral Yamamoto, Commander Genda, Lieutenant Commander Fuchida and many other key figures made the Pearl Harbor operation work through an almost fanatical faith in success and devotion to duty. As Prange points out in At Dawn We Slept, ". . . where they lacked weapons or techniques, they created them. Theirs was a triumph of spirit over matter, yes, even over intellect." (6:188) No one had to make the distinction between leading and managing. The Japanese warrior's mission was to engage and defeat the enemy.

American

American forces lacked cohesion in peacetime 1941. There was no enemy to prepare to fight and little warfighting spirit present in our troops or leaders. The objective was to deter and prevent war, not fight it. Personnel policies also degraded our capability. Whereas the Japanese trained as a unit for months prior to the attack, American forces constantly changed assignments. (6:59, 163)

SUMMARY

The Japanese victory at Pearl Harbor was largely a result of the correct application of the principles of war. Objective, offensive, surprise, security, mass and economy of force, maneuver, timing and tempo, unity of command, simplicity, logistics, and cohesion were combined to defeat the American forces guarding the "strongest fortress in the world." The Japanese made several strategic and tactical mistakes, yet attained overwhelming overall success through their wise use of the above principles. Diligent study of the same principles of war will certainly increase the professional military officer's chance of victory on the battlefields of tomorrow.

Chapter Three

SEMINAR DISCUSSION QUESTIONS

The following seminar guided discussion questions provide a vehicle for the ACSC course officer to gain further knowledge of military history while applying the principles of war listed in AFM 1-1. After covering this material, a seminar should understand the Japanese attack on Pearl Harbor and be able to analyze how each side applied or violated the principles of war.

DISCUSSION QUESTIONS

1. Lead Off Question

What was the primary reason the Japanese attacked Pearl Harbor?

Discussion

Relations between the United States and Japan became strained in the late 1930s due to the Japanese occupation of China and incursions into Southeast Asia. Due to these expansionistic policies, President Roosevelt placed an American embargo, including oil, on Japan. An island nation, the Japanese looked to the rich "southern resources area" (Malaya, Indo-China, Netherland East Indies, etc.) for raw materials. Prior to depleting her oil supply, she needed to occupy this area. The main obstacle to invasion was the United States Pacific Fleet at Pearl Harbor. Hence, a pre-emptive strike was directed at Hawaii to remove the threat.

a. Follow-up Question

Did the Japanese attack meet the principle of objective in AFM 1-1?

Discussion

Yes and no! The Japanese did neutralize the Pacific Fleet thereby allowing her Army to occupy Southeast Asia. The United States offered little resistance to Japanese expansion in the region for the next several months. However, in the ultimate military objective of destroying the enemy's armed forces and will to fight, Japan was totally unsuccessful. The battleships and air assets in Hawaii were soon salvaged or replaced and American determination and will to enter and win a war was greatly intensified.

b. Follow-up Question

What was Japan's most serious tactical error in the Pearl Harbor operation?

Discussion

There were really two major errors. First, Admiral Nagumo's decision not to reattack denied the Japanese a major victory. A significant number of cruisers and destroyers could have been destroyed during a second attack. Second, the failure to attack the Navy's oil supply farms, ammunition depots, docking facilities, and machine shops allowed the Americans to escape without a serious long term effect on the operational capability of Pearl Harbor. Destruction of these key facilities would have forced the Pacific Fleet to operate from the West Coast of the United States.

c. Follow-up Question

What principle of war did Admiral Nagumo violate by not reattacking?

Discussion

The principle of timing and tempo. He failed to optimize his forces when the United States was unable to react. He possessed air and sea superiority but failed to pursue the attack.

d. Follow-up Question

What was the American objective prior to Pearl Harbor?

Discussion

The United States objective in the Pacific was political. We hoped to slow Japanese adventurism through a series of embargoes, political initiatives, and military pressure. The Pacific Fleet was stationed in Hawaii and a buildup of forces in the Philippines started. The purpose of these measures was to move the American defensive line to the west and deter war with Japan while we mobilized our armed forces and expanded our production base.

2. Lead Off Question

What was the primary cause of the American defeat at Pearl Harbor?

Discussion

There is no simple answer to this question. Some people may argue that Japanese surprise or the American decision to concentrate on the European theater, led to our defeat. The key reason, however, was the United States violation of the principle of security. The Americans misread and misinterpreted warnings of the attack for over a year, despite the fact that we were privy to certain Japanese secret codes. No one really believed that Japan would attack Pearl Harbor; therefore, the evidence was routinely disregarded. This allowed Japan to gain complete surprise, the key to her success.

a. Follow-up Question

List some of the warnings the United States received prior to the attack.

Discussion

There were Ambassador Grew's rumor from a Peruvian diplomat, Secretary of the Navy Knox's theory that an attack on Hawaii was possible, the Martin-Bellinger and Farthing reports, the "bomb plot" message, the war warnings of Stark and Marshall, the submarine sightings by the USS Ward, and detection of a large formation of unidentified aircraft on 7 December by Army radar.

3. Lead Off Question

Explain how Admiral Yamamoto applied the principles of offensive, surprise and mass in the Pearl Harbor operation.

Discussion

Previous Japanese naval strategy in the Western Pacific was to fight a defensive battle against the United States near the home islands. Yamamoto rejected this thinking in favor of a bold strike at the heart of the American forces in the Pacific, Pearl Harbor. He seized the offensive at the initiation of hostilities, completely surprising the American defenders. Yamamoto insisted that six carriers be used in the operation, even though they were also needed to support the land invasion in Southeast Asia.

a. Follow-up Question

What prevented the United States from interdicting the Japanese invasion forces headed for Southeast Asia or stopping their breakout from Japan?

Discussion

The policy of the United States at the time was to let Japan fire the first shot even though we knew war was inevitable. In effect, the principle of offensive was removed from the American arsenal by a political decision.

4. Lead Off Question

How did the Japanese use the principle of maneuver at Pearl Harbor?

Discussion

The Japanese employed maneuver by moving their carrier task force undetected from the Inland Sea to a point 200 miles north of Oahu. They accomplished this by traversing the extremely rough winter seas of the Northern Pacific. This allowed them to stay out of all known commercial shipping lanes and avoid detection by long range American patrol aircraft. It also allowed them to initiate the attack from a completely unexpected position.

a. Follow-up Question

Explain why logistics was important to maneuver in this operation?

Discussion

The northern route to Hawaii was the longest, thereby compounding the refueling problem. The Japanese fleet was designed to operate near home and was severely fuel limited for long strikes. The logisticians solved the problem of refueling carriers and cruisers at sea, allowing Admiral Nagumo more freedom of action. This clearly illustrates that military forces must be at the right place at the right time to be effective.

5. Lead Off Question

Compare and contrast the principle of unity of command as applied by the Japanese and Americans.

Discussion

The Japanese effort at Pearl Harbor exemplified effective unity of command. Admiral Yamamoto was overall commander and provided general guidance; however, he delegated complete authority to each subordinate level in the operation. For example, Lieutenant Commander Fuchida was the airborne commander over Hawaii and ran the entire operation without direction from above. In contrast, the United States Army and Navy on Oahu were two separate entities who had very little idea what the other organization was doing. Additionally, lower level supervisors in both services were hesitant to act decisively due to lack of authority (witness the USS Ward and Army radar incidents).

a. Follow-up Question

Was there also a difference in cohesion among the forces?

Discussion

Yes. Very definitely. While the Americans had no enemy prior to Pearl Harbor, the Japanese trained for their mission for months. In addition, the Japanese instituted personnel policies which kept their fighting units intact, while American units at Pearl Harbor were in a constant state of turbulence. The real difference, however, lay in the warrior spirit of the Japanese fighting man. The American forces did not acquire this spirit until attacked.

6. Lead Off Question

How was the principle of simplicity applied by the Japanese?

Discussion

Japanese aircrews trained together extensively for Pearl Harbor. Additionally, they were provided detailed study aids and intelligence information on the way to Hawaii. Both the operations order and attack plan were simple and did not depend on a series of interrelated actions to work. As an example, when Fuchida's action signal was misinterpreted by the Japanese dive bombers, the plan was still executed successfully.

a. Follow-up Question

What was the main cause of confusion among American forces during the attack?

Discussion

Certainly Japanese surprise added to the confusion, but our main problem was the lack of a plan. Neither Admiral Kimmel nor General Short believed it was their mission to defend the fleet at Pearl Harbor. Therefore, there was little contingency planning to do so. The United States did not prepare in peacetime to avoid confusion in war.

7. Lead Off Question

Relate Commander Genda's planning for Pearl Harbor to the principles of war.

Discussion

Genda's basic plan included at least six principles of war. He said the attack must catch the enemy by surprise (SURPRISE), the main objective should be the enemy carriers (OBJECTIVE), every Japanese carrier should participate (MASS), refueling at sea would be necessary (LOGISTICS), the attack should be in the early morning (TIMING), and all planning must be done in secrecy (SECURITY).

a. Follow-up Question

What was the significance of the Martin-Bellinger and Farthing reports?

Discussion

Both staff studies accurately predicted many features of the actual Japanese attack on Pearl Harbor. These studies also included many of the principles of war in their analyses.

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